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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/715,449 | 11/19/2003 | Makoto Mogamiya | P24123 | 3934 |
| 7055 | 7590 | 11/03/2004 | EXAMINER | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | RAO, SHRINIVAS H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2814 | |

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,449

Applicant(s)

MOGAMIYA ET AL.

Examiner

Steven H. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 19/02/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), claiming priority from Japanese Patent Application No. 2002-338996 filed on November 22, 2002 which papers have been placed of record in the file.

Information Disclosure Statement

Acknowledgment is made of receipt of Applicant's Information Disclosure Statement (PTO-1449) filled February 19, 2004.

The references on PTO 1499 submitted on 02/19/04 are acknowledged. All the cited references have been considered. However the foreign patents and documents cited by applicant are considered to the extent that could be understood from the abstract and drawings.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 to 7, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claims 3-7 the phrase "general outer shapes " renders the claim indefinite because it not clear what is include/exclude by the expression.

Similarly in claims 5, 10 " general outer shape thereof are geometrically similar " it is not clear what is include/excluded.

Similarly in claims 8 and 9, " general outer dimensions" " it is not clear what is include/excluded.

Further the specification nor the knowledge of one skilled in the prior art clarifies what applicants' intend to include/exclude by the recitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito et al. .
(U.S. Patent No. 6,583,819, also cited by Applicants' in their –lds, herein after Ito).

With respect to claim 1 Ito describes an image pick-up unit comprising: an image pick-up device; (Ito fig. 1 # 25, col. 3 lines 20-21) and a plurality of optical filters which are cemented together in layers and positioned in front of said image pick-up device, (Ito figure 1 #23, col.3 lines 20) wherein at least two optical filters among said plurality of

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optical filters, which have different optical properties, are different in shape from each other. (Ito figure 1)

With respect to claim 2 Ito describes wherein each optical filter of said plurality of optical filters is asymmetrical with respect to a center of said each optical filter. (Ito filters 23 are asymmetrical to center 24) .

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (U.S. Patent No. 6,583, 819, herein after Ito) as applied to claims 1-2 above and further in view of Yamaguchi et al., (US Patent Application Publication No. 2001/0017663, herein after August 30, 2001).

With respect to claim 3, to the extent understood , Ito describes the image pick-up unit according to claim according to claim 1, wherein said plurality of optical filters are formed so that general outer shapes thereof are geometrically similar to each other. (Ito figure ! # 23 similar) and wherein each optical filter has at least four corners, (Ito figure1 #23 has 4 corners)

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Ito does not specifically describe each of which is cut out by a predetermined amount and wherein each of said plurality of optical filters said four corners is cut out by an amount different from an amount cutout of each of remaining corners of said four corners is formed so that at least one of.

However, Yamaguchi, a printed publication (us patent application) describes in figure 26, etc, and para 0090 describes each of which is cut out by a predetermined amount and wherein each of said plurality of optical filters said four corners is cut out by an amount different from an amount cutout of each of remaining corners of said four corners is formed so that at least one of, to reduce the number of parts by placing replacing two separate image capturing portion (camera) and optical communication portion (infra red communication portion) by a single portion containing both adjacent to each other thereby reducing camera bulk and improve the convenience on user's handling .

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Yamaguchi's each of which is cut out by a predetermined amount and wherein each of said plurality of optical filters said four corners is cut out by an amount different from an amount cutout of each of remaining corners of said four corners is formed so that at least one of in Ito's device . The motivation to make the above combination is to reduce the number of parts by placing replacing two separate image capturing portion (camera) and optical communication portion (infra red communication portion) by a single portion containing both adjacent to each other

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thereby reducing camera bulk and improve the convenience on user's handling .(Yamaguchi pars 0011, 0012 and 0091).

With respect to claims 4 and 5 , to the extent understood, Ito describes the image pick-up unit according to claim 1, wherein each optical filter of said plurality of optical filters are formed so that general outer shapes thereof are same (cl. 4) geometrically similar to each other, (Ito figure 1 # 23 similar) wherein each optical filter of said plurality of optical filters has at least four corners each of which is cut out by a predetermined amount, (Yamaguchi in figure 26, etc, and para 0090) and wherein each of said plurality of optical filters except for at least one thereof is formed so that at least one of said four corners is cut out by an amount different from an amount cutout of said four corners each of remaining corners of said four corners.(Yamaguchi figure 26, two corners of 221 straight other two corners rounded)

With respect to claims 6 and 7, to the extent understood, Ito describes The image pick-up unit according to claim filters are formed are geometrically wherein said plurality of optical so that general outer shapes thereof similar to each other ,(reject ed for reasons set out claims 3-5 above) and wherein each of said plurality of optical filters comprises one of a projection and a recess on an outer edge of said each optical filter which does not overlap another optical filter of said plurality of optical filters when said plurality of optical filters are cemented together in layers. (Ito figure 5B #23 projecting beyond 24 and Yamaguchi para 0074)

With respect to claims 8 and 9 to the extent understood Ito describes the image pick-up unit according to claim 1, wherein said plurality of optical filters are formed so that

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general outer shapes thereof and are geometrically similar to each other, (Ito see rejections 1-7 above)and wherein each of said plurality of optical filters except for at least one thereof includes one of a projection and a recess on an outer edge of said each optical filter which does not overlap another optical filter of said plurality of optical filters when said plurality of optical filters are cemented together in layers. (Ito figure 5 b projections Yamaguchi para 0074)

With respect to claims 10 and 11 to the extent understood describes the image pick-up unit according to claim 1, wherein an optical filter of said plurality of optical filters which is positioned closest to said image pick-up device comprises an infrared cut-off glass serving as a cover glass for covering the front of said image pick-up device to seal said image pick-up device, (Yamaguchi figure 23) and wherein each optical filter of said plurality of optical filter except for said infrared cut-off glass comprises an optical low-pass filter. (Ito figure 5B).

With respect to claim 12 Ito describes the image pick-up unit according to claim wherein a rear surface of one of said plurality of optical filters which is cemented to a front surface of said infrared cut-off glass is coated with an optical matched filter coating, (Yamaguchi figure 23,26) and wherein at least one surface of remaining surfaces of said plurality of optical filters is coated with an anti-reflection coating. (Yamaguchi para 0073black layer 212) .

With respect to claims 13 and 14 , to the extent understood, describes The image pick-up unit according to claim 11, wherein a thickness of each optical filter of said for said infrared Plurality Of Optical filters , except for said infrared cut off glass (

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Ito figure 5B) , is one of equal to and less than approximately 0.3mm, (Ito and Yamaguchi) and wherein outer dimensions of said plurality of optical filters, except for said infrared cut-off glass, decrease stepwise in a direction from said infrared cut-off glass toward a side from which incoming light is incident on said image pick-up device : (Ito figs. 5B and 6B).

With respect to claim 15 , to the extent understood, Ito describes the image pick-up unit according to claim 11, wherein each optical filter of filters is made of one of the said plurality of optical following birefringent glass niobate and lithium tri- materials quartz, lithium borate. (All well known materials for optical filters).

With respect to claim 16. Ito describes the image pick-up unit according to claim 1, wherein said pluralities of optical filters, which are cemented together in layers, are cemented to said image pick-up device. (Ito figures 3,5, etc.) .

With respect to claim 17 Ito describes the image pick-up unit according to claim 1 wherein each optical filter of said plurality of optical filters is substantially rectangular in shape, (Ito figures) each of four corners of said each optical filter being chamfered. (Yamaguchi fig. 26, etc.) .

With respect to claim 18 Ito describes an image pick-up unit comprising an image pick-up device; and a plurality of optical filters which are made of cemented layers of optical material, and positioned immediately in front of said image pick-up device, (see rejections of claims 1-17 above) wherein the length and width of at least one optical filter of said plurality of optical filters are different from the length and

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width of another optical different from the length and width of another optical filter of said plurality of optical filters. (Ito figure 5b 23,24, etc. different).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is (703) 3065945. The examiner can normally be reached on 8.00 to 5.00.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

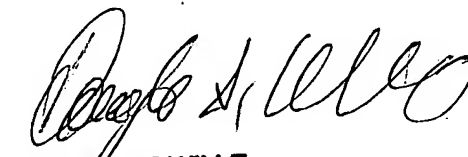
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Steven H. Rao

Patent Examiner

October 28, 2004.



DOUGLAS WILLE
PRIMARY EXAMINER